CURRENT STATUS OF THE CLAIMS

In the Claims

The following is a marked-up version of the claims with the language that is underlined ("___") being added and the language that contains strikethrough ("—") being deleted:

1. (Original) A pharmaceutical composition comprising:

a polypeptide comprising at least one discoidin/C domain in an amount effective to modulate mammalian gamete adhesion.

2. (Original) The composition of claim 1, wherein the polypeptide further comprises at least one EGF domain.

3. (Currently Amended) The composition of claim 1 ~~claims 1 or 2~~, further comprising a pharmaceutically acceptable carrier or excipient.

4. (Currently Amended) The composition of claim 1 ~~claims 1–3~~, wherein the polypeptide competitively inhibits in vivo or in vitro binding of sperm to unfertilized zona pellucida.

5. (Currently Amended) The composition of claim 1, wherein the polypeptide promotes in vivo or in vitro binding of sperm to unfertilized zona pellucida.

6. (Currently Amended) The composition of claim 1 ~~claims 1–5~~, wherein the polypeptide comprises SED1 polypeptide or a fragment thereof.

7. (Currently Amended) The composition of claim 1 ~~claims 1–5~~, wherein the polypeptide comprises SEQ ID NOs. 2-7 or a fragment thereof.

8. (Currently Amended) The composition of claim 1 ~~claims 1-7~~, wherein the compound binds to male gametes, female gametes, male and female gametes, zona pellucida, or combinations thereof.

9. (Original) A recombinant polypeptide comprising SEQ ID Nos. 2-7 or a fragment thereof, wherein the recombinant polypeptide modulates mammalian gamete adhesion.

10-42. (Canceled)

43. (Newly Added) The composition of claim 2, further comprising a pharmaceutically acceptable carrier or excipient.

44. (Newly Added) The composition of claim 2, wherein the polypeptide competitively inhibits in vivo or in vitro binding of sperm to unfertilized zona pellucida.

45. (Newly Added) The composition of claim 3, wherein the polypeptide competitively inhibits in vivo or in vitro binding of sperm to unfertilized zona pellucida.

46. (Newly Added) The composition of claim 4, wherein the polypeptide competitively inhibits in vivo or in vitro binding of sperm to unfertilized zona pellucida.

47. (Newly Added) The composition of claim 2, wherein the polypeptide comprises SED1 polypeptide or a fragment thereof.

48. (Newly Added) The composition of claim 4, wherein the polypeptide comprises SED1 polypeptide or a fragment thereof.

49. (Newly Added) The composition of claim 2, wherein the polypeptide comprises SEQ ID NOs. 2-7 or a fragment thereof.

50. (Newly Added) The composition of claim 4, wherein the polypeptide comprises SEQ ID NOs. 2-7 or a fragment thereof.

51. (Newly Added) The composition of claim 2, wherein the compound binds to male gametes, female gametes, male and female gametes, zona pellucida, or combinations thereof.

52. (Newly Added) The composition of claim 4, wherein the compound binds to male gametes, female gametes, male and female gametes, zona pellucida, or combinations thereof.